

## ABSTRACT

A system and method facilitating network diagnostics and self-healing is provided. The invention includes a data stream monitor component adapted to selectively copy protocol specific subset(s) of raw network data and provide the subset(s) of data to a diagnostics engine. The invention further includes a diagnostic engine adapted to facilitate network diagnostics and/or self-healing.

The invention further provides for protocol state compressor(s) to analyze the protocol specific subset(s) of data to abstract and/or analyze relevant information about the specific protocol without having to strictly process the protocol or preserve protocol state variable(s) in order to analyze the state of the specific protocol. Based upon this analysis, the protocol state compressor(s) can generate event(s) for undesirable state(s) (*e.g.*, error(s) and/or failure(s)) and/or congested state(s) for use by the event correlator/inference engine. Additionally, the protocol state compressor(s) can provide information to the event correlator/inference engine regarding the state of the specific protocol (*e.g.*, success(es)).